Habitat Use, Seasonal Distribution, and Tendency to Aggregate of Common Carp (*Cyprinus carpio)* in Clear Lake, Iowa

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Since its arrival in North America in the late 1800's, the highly competitive common carp (*Cyprinus carpio)* has become one of the continent's most widely distributed fish species. Carp in search of food often physically uproot aquatic vegetation and suspend large amounts of sediment in the water column. In Clear Lake and other systems with high carp biomass, the collective activity of these fish can reduce habitat quality for the native biota and accentuate water quality decline, making reduction of carp numbers a key objective in improving lake health.

To formulate an efficient and effective control strategy, radio telemetry is being used to collect data on the seasonal locations, habitat use, movements, and tendency to aggregate of carp in Clear Lake. In fall 2004 a representative sample of 30 adult (≥ 51 cm in length) and 30 subadult carp (15-20 cm in length) from Clear Lake were surgically implanted with internal radio transmitters. Year-round monitoring of these fish will allow investigators to quantify and characterize seasonal distribution and habitat use by common carp in Clear Lake, providing lake managers with insight into the optimal times and locations to remove carp through targeted netting or poisoning.

In January and February of 2005, telemetered adult carp were aggregated (many fish < 50 m apart) on the lake's west end, suggesting that tag-bearing adults were part of a larger aggregation of conspecifics. These preliminary results suggest that adult common carp may be vulnerable to efficient removal of a significant proportion of the lake-wide population under ice cover.

Completion of this study in 2007 will provide a comprehensive, year-round assessment of the locations, movements and tendency of carp to aggregate in Clear Lake. These results will provide key information for a carp reduction strategy.

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